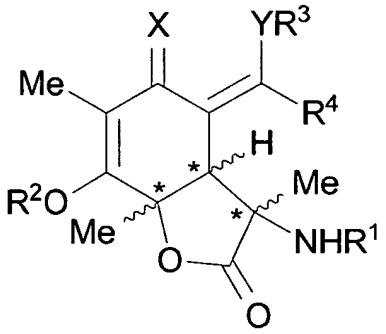
In the claims

The following amendments are made with respect to the claims in the international application PCT/EP2003/007805.

This listing of claims will replace all prior versions and listings of claims in this application.

1-23 (Cancelled).

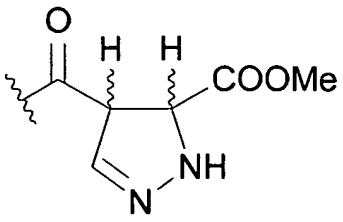
24 (New). A compound of the general formula (**2**):



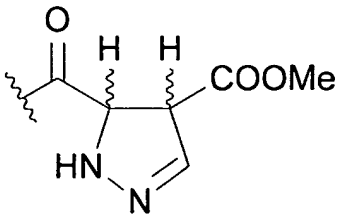
(**2**)

wherein

R^1 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), (C_3-C_{10})-alkenyl, and acyl groups, wherein free –COOH-groups can be present on the acyl group in the form of esters; or, optionally, R^1 can be (**3**) or (**4**)



(3)



(4) ;

R^2 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^3 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

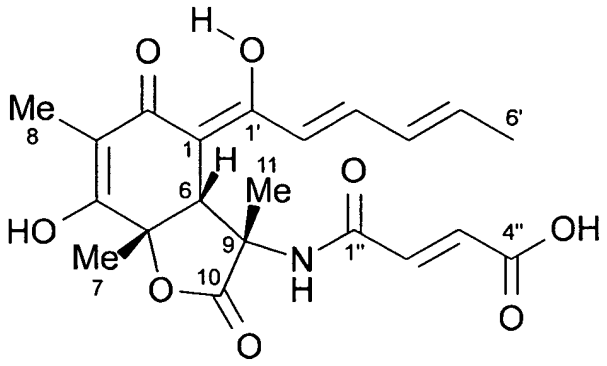
R^4 is selected from the group consisting of: (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and (C_3-C_{10})-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consistinf of O, S, NOH and NOR^5, wherein R^5 is a straight chain or branched chain (C_1-C_6)-alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an (*R*,*R*,*R*)-, (*R*,*R*,*S*)-, (*R*,*S*,*R*)-, (*R*,*S*,*S*)-, (*S*,*R*,*R*)-, (*S*,*R*,*S*)-, (*S*,*S*,*R*)- or (*S*,*S*,*S*)-stereoisomer; and pharmaceutically acceptable salts or solvates of (2).

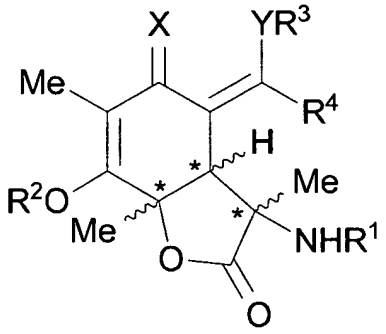
25 (New). The compound according to claim 24 having the formula (1):



(1)

(sorbicillacton A) and derivatives thereof, their diastereomers, as well as the corresponding enantiomers, and pharmaceutically acceptable salts or solvates of this compound.

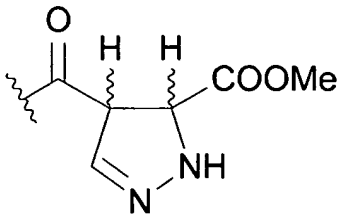
26 (New). A method for the production of a compound of the general formula (**2**):



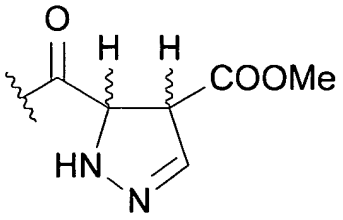
(2)

wherein

R^1 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), (C_3-C_{10})-alkenyl, and acyl groups, wherein free –COOH-groups can be present on the acyl group in the form of esters; or, optionally, R^1 can be (**3**) or (**4**)



(3)



(4)

;

R^2 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^3 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^4 is selected from the group consisting of: (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and (C_3-C_{10})-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consistinf of O, S, NOH and NOR^5, wherein R^5 is a straight chain or branched chain (C_1-C_6)-alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

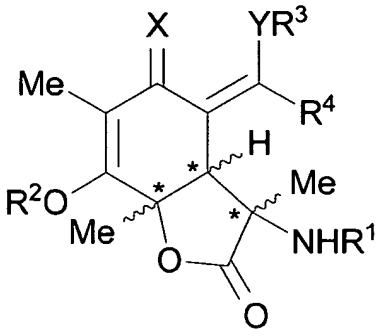
wherein the compound can be present as an (*R*,*R*,*R*)-, (*R*,*R*,*S*)-, (*R*,*S*,*R*)-, (*R*,*S*,*S*)-, (*S*,*R*,*R*)-, (*S*,*R*,*S*)-, (*S*,*S*,*R*)- or (*S*,*S*,*S*)-stereoisomer; and pharmaceutically acceptable salts or solvates of (2);

wherein said method comprises growing a fungus of the genus *Penicillium* and isolating said compound from the culture medium and/or the fungal biomass.

27 (New). The method according to claim 26, characterised in that the growing of the fungus takes place in a marine organism.

28 (New). The method according to claim 26, further comprising a subsequent synthetic derivatisation of the isolated compound.

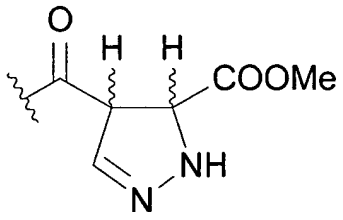
29 (New). A method for the biomimetic synthesis of a compound of the general formula (2):



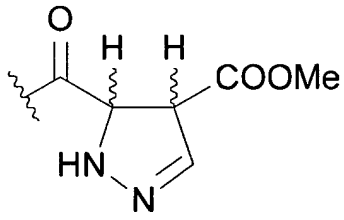
(2)

wherein

R^1 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), (C_3-C_{10})-alkenyl, and acyl groups, wherein free –COOH-groups can be present on the acyl group in the form of esters; or, optionally, R^1 can be (3) or (4)



(3)



(4)

;

R^2 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^3 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^4 is selected from the group consisting of: (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and (C_3-C_{10})-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consistinf of O, S, NOH and NOR^5, wherein R^5 is a straight chain or branched chain (C_1-C_6)-alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an (*R*,*R*,*R*)-, (*R*,*R*,*S*)-, (*R*,*S*,*R*)-, (*R*,*S*,*S*)-, (*S*,*R*,*R*)-, (*S*,*R*,*S*)-, (*S*,*S*,*R*)- or (*S*,*S*,*S*)-stereoisomer; and pharmaceutically acceptable salts or solvates of (2);

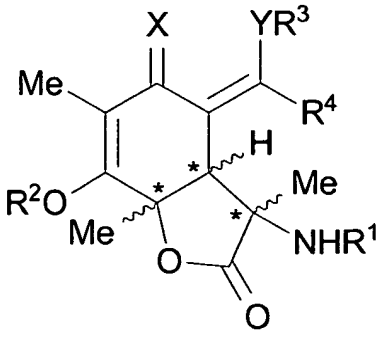
wherein said method comprises:

a) providing sorbicillin and/or a derivative thereof;

b) oxidative dearomatisation and subsequent addition of alanin or other amino acid or an analogue thereof; and

c) subsequent attachment of fumaric acid or an analogous acyl residue.

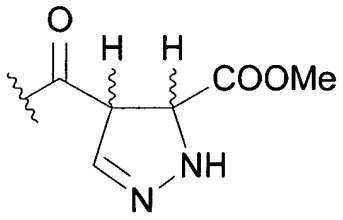
30 (New). A pharmaceutical composition comprising a compound of the general formula (**2**):



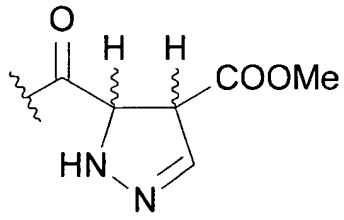
(2)

wherein

R^1 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), (C_3-C_{10})-alkenyl, and acyl groups, wherein free –COOH-groups can be present on the acyl group in the form of esters; or, optionally, R^1 can be (**3**) or (**4**)



(**3**)



(**4**)

;

R^2 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^3 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^4 is selected from the group consisting of: $(C_1\text{-}C_{10})$-alkyl (wherein alkyl is straight or branched), and $(C_3\text{-}C_{10})$-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consistinf of O, S, NOH and NOR^5, wherein R^5 is a straight chain or branched chain $(C_1\text{-}C_6)$-alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an (*R*,*R*,*R*)-, (*R*,*R*,*S*)-, (*R*,*S*,*R*)-, (*R*,*S*,*S*)-, (*S*,*R*,*R*)-, (*S*,*R*,*S*)-, (*S*,*S*,*R*)- or (*S*,*S*,*S*)-stereoisomer; and pharmaceutically acceptable salts or solvates of (2);

together with one or more suitable excipients and additives.

31 (New). The pharmaceutical composition according to claim 30, characterised in that the compound is present in the form of a depot substance or as a precursor, together with a suitable, pharmaceutically acceptable diluent or carrier substance.

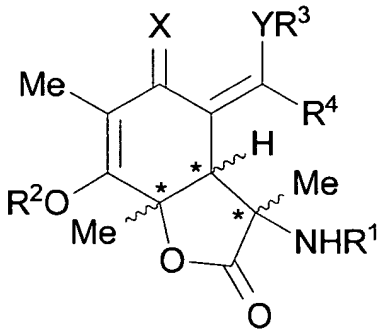
32 (New). The pharmaceutical composition according to claim 30, characterised in that the compound is present in an amount of 20 µg.

33 (New). The pharmaceutical composition according to claim 30, characterised in that the compound is present in an amount such that a concentration range of between 0.3 and 3.0 µg/ml is present at a treatment *in vivo*.

34 (New). The pharmaceutical composition according to claim 30, characterised in that it contains further chemotherapeuticals.

35 (New). The pharmaceutical composition according to claim 30, in the form of tablets, dragées, capsules, droplets, suppositories, preparations for injection or infusion for peroral, rectal or parenteral use.

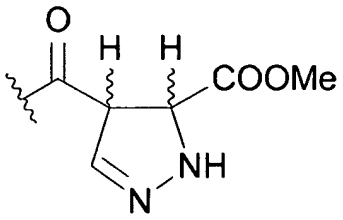
36 (New). A method for the treatment of a disease selected from the group consisting of tumours, viral diseases, and inflammatory conditions, wherein said method comprises administering a compound of the general formula (**2**):



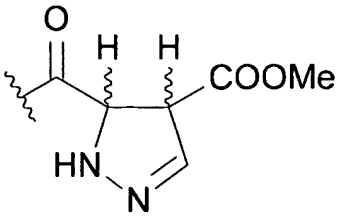
(**2**)

wherein

R^1 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), (C_3-C_{10})-alkenyl, and acyl groups, wherein free –COOH-groups can be present on the acyl group in the form of esters; or, optionally, R^1 can be (**3**) or (**4**)



(3)



(4) ;

R^2 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^3 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^4 is selected from the group consisting of: (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and (C_3-C_{10})-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consistinf of O, S, NOH and NOR^5, wherein R^5 is a straight chain or branched chain (C_1-C_6)-alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an (*R*,*R*,*R*)-, (*R*,*R*,*S*)-, (*R*,*S*,*R*)-, (*R*,*S*,*S*)-, (*S*,*R*,*R*)-, (*S*,*R*,*S*)-, (*S*,*S*,*R*)- or (*S*,*S*,*S*)-stereoisomer; and pharmaceutically acceptable salts or solvates of (2).

37 (New). The method according to claim 36, comprising administering the compound in the form of a depot substance or as a precursor, together with a suitable, pharmaceutically acceptable diluent or carrier substance.

38 (New). The method according to claim 36, wherein the viral disease is HIV-1, and the compound is administered in a concentration range of between 0.3 and 3.0 μg/ml.

39 (New). The method according to claim 36, wherein an inflammation is treated, and the compound is administered in a concentration of 2 μg/ml.

40 (New). The method according to claim 36, wherein the formation of oedema is treated, and the compound is administered in an amount of 20 μg.